

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



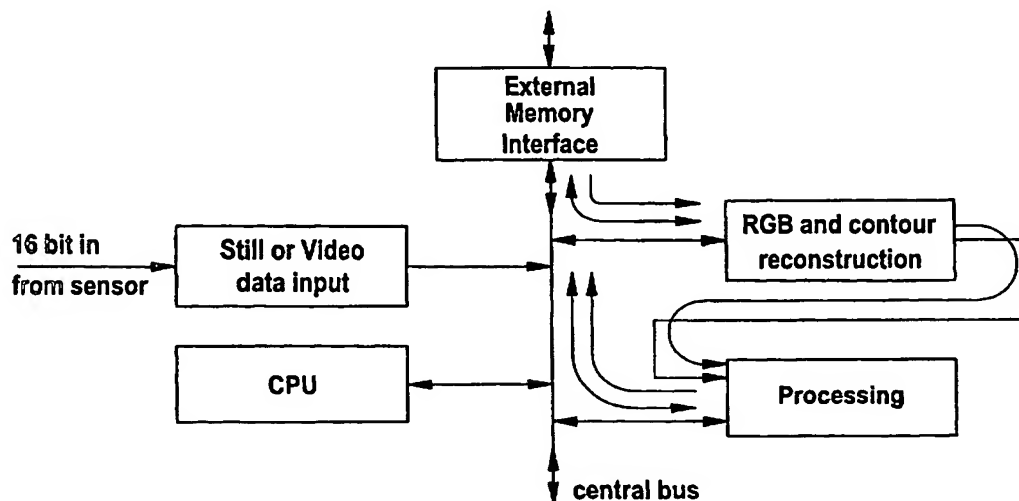
(43) International Publication Date
15 January 2004 (15.01.2004)

PCT

(10) International Publication Number
WO 2004/006182 A1

- (51) International Patent Classification⁷: **G06T 5/20**, H04N 9/04
- (21) International Application Number: PCT/IB2003/002651
- (22) International Filing Date: 24 June 2003 (24.06.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 02077691.0 4 July 2002 (04.07.2002) EP
- (71) Applicant (for all designated States except US): **KONINKLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **JASPERS, Cornelis, A., M.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (74) Agent: **SCHOENMAKER, Maarten**; Philips Intellectual Property & Standards, Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
- with international search report
 - before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND APPARATUS FOR SIGNAL PROCESSING, COMPUTER PROGRAM PRODUCT, COMPUTING SYSTEM AND CAMERA



(57) Abstract: A reconstruction method based on a white-compensated luminance-reconstruction and using filter weights referred to as smartgreen-parameters is proposed. An aliasing free luminance signal, even at the multiples of the sample frequency, and in case of a camera without optical low pass filter is achieved. Moreover this white-compensated-luminance-signal is free of signal distortion. The proposed method allows a suitable low pass filter to be added or combined and in particular will be suited to implement a variety of aliasing free color- and contour-filters. The RGB color signals are reconstructed using filter weights that can be chosen as a function of the heaviness of the sensor matrix and of the optical transfer of the camera. It is proposed to apply a contour-reconstruction-filter in parallel with the color-reconstruction-filter.